

Policies and Practices Associated with Medication Administration in  
Ohio Public Elementary Schools

A Senior Honors Thesis Presented in Partial Fulfillment of the Requirements for the Degree of  
Bachelor of Science in Nursing with Distinction  
College of Nursing of The Ohio State University

By

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**The Ohio State University**

2004

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## Abstract

**PROBLEM.** The federal *No Child Left Behind* initiative ensures that all children, regardless of health status or disability, have a right to attend public schools. Children with asthma, diabetes, ADHD, and other chronic illnesses or disabilities often need daily medications to control symptoms and prevent acute illness. Thus, an average of 5.6% of all public school children receive medications during the school day. Unlike hospitals, which are closely regulated, Ohio public schools have *no standards* for medication administration. A concern is that unlicensed and untrained personnel including principals, secretaries or health aides may be administering medications instead of a registered school nurse. A law initiated by the Ohio Department of Education protects these unlicensed personnel from liability for medication errors. Dwindling resources for public schools suggest that children in rural and low-income areas of Ohio may be at higher risk for medication errors because of fewer school nurses to supervise the medication administration process.

**PURPOSE.** This study was designed to identify policies and procedures currently used by individual schools, evaluate them compared to accepted nursing standards, and identify disparities in risk for medication errors among Ohio public schools according to their typology: rural, small town, urban/suburban, major city; high/low socioeconomic status; poverty level; size; type of district; and county.

**DESIGN.** Of 2,312 public elementary schools in Ohio, a random sample of 300 schools was selected to receive a one-page anonymous survey addressed to "School Nurse." The survey was designed to answer the following questions: who has responsibility for administering medications; what is their level of training; how is medication stored and documented; how are medication errors documented and managed? Responses were summarized according to frequency and percentage of categorical responses, and evaluated according to accepted nursing standards. Disparities in each of the above variables according to the schools' typology were examined using cross tabulation analysis.

**RESULTS.** A total of 287 surveys were mailed (13 schools no longer in operation), and 146 were returned for a response rate of 51%, representing 61.4% of the counties in Ohio. The majority of school nurses were white ( $n=126$ ) and female ( $n=145$ ), with an average of 9.3 years of experience as a school nurse (range 1-30; mode=6; SD=7.3). On any given day, medications were administered by the school nurse in only 32.8% of the schools and by the secretary in 42%. Training of non-nurse personnel in medication administration was typically annual or less often, informal, conducted by the nurse, with no standard of performance expected. None of the schools met nursing standards for storage or documentation of medications. The most common medication errors were missed doses (57.1%) and undocumented doses (38.1%). Typology four schools (small city, low socioeconomic status, high poverty) had the highest percentage of schools (77.8%) in which the school nurse did not administer medications any day of the week. Large city, average socioeconomic status, and high poverty schools had the largest percentage (50%) of schools in which the school nurse administered medications five days a week.

**IMPLICATIONS.** For the safety of Ohio's children, the need for a **standard of care** for medication administration in Ohio's elementary schools is clear. These standards should be developed, implemented and monitored by school nurses, not by education administrators or lawmakers.

## Introduction

All children are required by law to attend school and so they spend much of their day in this environment. Children with chronic health problems who require medications therefore must be medicated during school hours. The administration of medication in hospital settings is well regulated and strictly enforced. Only registered nurses or pharmacists can administer medications. Standard protocols are followed for preparing medications, identifying the recipients, administering, recording and following up on medications given. In the schools, however, nurses are not readily available, therefore medication administration is often delegated to unlicensed personnel. The scope of this problem is unknown. Concerns about the criteria for delegation, training, and follow-up with these unlicensed personnel have been raised as well as their potential for making errors in medication administration (Calabrese, Nanda, Huss, Winkelstein, Quartey, & Rand, 1999). The purpose of this study was to identify who typically administers medication in Ohio public elementary schools, evaluate their level of training, evaluate the policies and procedures used in the schools compared to standards of nursing practice, and to identify types of medication errors made in school settings. The findings have implications for development of standardized and clinically appropriate policies and procedures.

## Review of Literature

As the number of children with special health care needs and the number of before and after school programs, which lead to longer school days, have increased so too has the amount of medication administration in the schools (Sheetz & Blum, 1998). This increase in the amount of medication administration necessary in the schools leads to questions about who administers the medications and monitors their effect on the children. Also a lack of consistent standards for medication administration has been noted in the schools (Huss, Winkelstein, Calabrese, Nanda, Quartey, Butz, Resto, Huss, & Rand, 2001). The review of literature will address the issues of lack of consistent standards for medication administration, use of unlicensed assistive personnel, and medication errors in the school setting.

## **Lack of Consistent Standards**

There is an estimated ten to fifteen percent of children with a chronic health condition and one percent with a severe chronic health condition (McCarthy, Kelly, & Reed, 2000). Children with common chronic conditions such as diabetes mellitus and asthma can be found in almost all school districts. There has also been an increase in the number of children diagnosed with emotional and behavioral problems in the past two decades such as Attention Deficit Hyperactivity Disorder (ADHD). These children often require medication as part of their treatment and frequently these medications must be administered during school hours. According to one study that surveyed 1000 randomly selected school nurses about medication administration practices in the schools an average of 5.6% of children received medications during the school day.

The article, "Medication Administration in Schools: The Massachusetts Experience", described the steps taken in Massachusetts to make consistent standards for medication administration in the schools (Sheetz & Blum, 1998). This state, like many states, lacked consistent standards for medication administration across the school system (Sheetz & Blum, 1998). This could be seen by the more than fifty weekly telephone calls from school health personnel regarding this subject (Sheetz & Blum, 1998). Consistent standards for medication administration vary widely not only in Massachusetts but in other states as well. Two studies, "Medication Administration Practices of School Nurses" and "Asthma Knowledge, Roles, Functions, and Educational Needs of School Nurses", showed that practices varied widely in such areas as who was to administer medications, how medications were to be stored within the school, medication documentation, and the self-administration of medications (McCarthy, Kelly, & Reed, 2000 ; Calabrese, Nanda, Huss, Winkelstein, Quartey, & Rand, 1999).

The American Nurses Association (ANA) published in 1983 *Standards of School Nursing Practice* as well as *Statement on the Scope and Standards of Pediatric Clinical Nursing Practice* in conjunction with the Society of Pediatric Nurses in 1996. These two published standards of

care relating to nursing and children included vague protocols about administering medications. Standard II of *Standards of School Nursing Practice* calls for the school nurse to establish and maintain a comprehensive school health program. The school nurse should “consult with school administration to establish, review, and revise policy and procedures for a comprehensive school health program,” this includes medication administration protocols (ANA p. 4, 1983). In Standard III, the nursing process includes individualized health plans which are developed by the school nurse (ANA, 1983). For the chronically ill student, the nurse’s responsibilities are to educate the client, family and school personnel regarding the specific condition and to monitor the treatment regime to ensure continuity of care (ANA, 1983). For the terminally ill student, the school nurse should arrange for physical care, medication, and treatments as well as offer anticipatory guidance to student, family, school personnel and peers in preparation for death (ANA, 1983). In *Statement on the Scope and Standards of Pediatric Clinical Nursing Practice*, Standard VIII states the “pediatric nurse assigns tasks or delegates care based on the needs and preferences of the child and family and the knowledge and skill of the provider selected,” (ANA & Society of Pediatric Nurses, 1996, p. 35). Minimal standards for medication administration are listed in Box 1 (Altman, Buchsel, & Coxon, 2000).

Box 1. Standards of Medication Administration

- Review the action, purpose, normal dosage and route, common side effects, time of onset and peak action, and nursing implications of each drug in order to monitor the child’s response to the medication
- Assess the child’s condition to determine if the order of the physician or qualified practitioner is appropriate as the client’s condition may have changed since the order was written
- Assess the child’s school health record for a history of allergies to food or medications so that these medications can be avoided

- Administer medications according to the five rights: right patient, right time, right medication, right dose, and right route
- Evaluate the client's response to the drug within 30 minutes of administration or sooner if an allergic reaction is anticipated
- Record the date and time each drug was administered as well as initials and signature
- In the nurses' notes record the date, time, and reason a drug was withheld

### **Use of Unlicensed Assistive Personnel**

The National Association of School Nurses (NASN) recommends a ratio of one registered nurse to every 750 school children; however, reports suggest that a ratio exists in the United States of America of one school nurse to every 1,300 to 1,400 children (McCarthy, Kelly, & Reed, 2000). The absence of school nurses leads to other staff members administering medications (Huss et al., 2001). According to the study "Once-a-Day Concerta Methylphenidate versus Three-Times-Daily Methylphenidate in Laboratory and Natural Settings" the administration of medications for ADHD is often done unreliably when other school staff are responsible for medication administration (Pelham et al., 2001). This study also found in some schools, administrative policies prohibit school personnel from administering psychoactive medication or controlled substances, and so the children with ADHD (who tend to be disorganized and fail to remember things) must remember to go to a designated place in school at the appropriate time to take their midday pills, or even to go to their lockers and take their pills themselves (Pelham et al., 2001). This is why some schools have turned to the use of unlicensed assistive personnel (UAP).

The study "Medication Administration Practices of School Nurses" sent a 62 closed-ended question survey to 1000 randomly selected nurses from NASN and received a 64.9% response rate (McCarthy, Kelly, and Reed, 2000). The study found that those persons who have

access to the medications in a school setting are nurses (100%), secretaries (72%), principals (62.2%), health aides (42.2%), and teachers (18.1%). Of the 649 respondents those who dispense medications are the school nurse (24.3%), secretaries (50%), health aides (30%), teachers (28.7%), parents (13.4%), students (12.2%), and others (28.5%). The secretaries were the most frequent UAP to deliver medications. If the UAP had training in administering medications it was likely to be an educational program taught by the school nurse lasting less than two hours with a yearly review session. Notably, while approximately 75% of school nurses in this study used UAP, 33% felt uncomfortable or very uncomfortable with this practice and 19.1% were unsure if their state nurse practice act allowed delegation of medication administration to UAP. In Ohio, the nurse practice act sanctions delegation of medication administration to a UAP when the individual has been employed by the local board of education in accordance with section 3313.713 of the Revised Code (Nurse Practice Act, 2004). This code requires “the board of education of each school district to adopt a policy on the administration to students of drugs prescribed by physicians and to limit the liability of board employees” (Columbus Public Schools, 1998, p.1). The code also states that “no person who has been authorized by a board of education to administer a drug and has a copy of the most recent statement required by division (c) (2) or (3) of this section given to him in accordance with division (D) of this section prior to administering the drug is liable in civil damages for administering or failing to administer the drug, unless such a person acts in a manner that constitutes gross negligence or wanton or reckless misconduct” (Columbus Public Schools, 1998, p. 1).

Another study, “Asthma Knowledge, Roles, Functions, and Educational Needs of School Nurses”, determined the attitudes, beliefs, and knowledge about asthma of school nurses in Maryland in the District of Columbia (Calabrese et al., 1999). A survey was sent to 790 school nurses in this area and 550 surveys were completed and returned for a response rate of 70%. This study found that 78% of students were permitted to self-administer inhaled asthma

medications, but only 17% were allowed to self-administer oral asthma medications. Even if the student was permitted to self-administer prescription medication, 60% of the school nurses reported direct supervision of the student was required. Sixty eight percent of school nurses delegated medication administration and the most frequently delegated medication was oral medications.

The study “Rural School Nurses’ Asthma Education Needs” sought to understand asthma needs in rural communities, specifically with the rural public school system (Huss et. al, 2001). It found that rural school nurses were less likely to be licensed as RNs ( $p < 0.05$ ) and had less school health nursing experience ( $p < 0.01$ ). Approximately 79.7% of rural nurses had health assistants compared to 59.7% of urban/suburban nurses ( $p < 0.01$ ).

### **Medication Errors**

Due to the complexity of dispensing medications in schools, some medication errors will occur. According to the “Medication Administration Practices of School Nurses” frequent medication errors occur in the schools (McCarthy, Kelly, and Reed, 2000). Three hundred and fifteen (48.5%) of the 649 school nurses who responded to the survey reported a medication error in the past year in their school. The odds of making a medication error increased with the number of students served (1.32), the use of UAP (3.1), and the education of the nurse (1.56). The increased odds of a BSN/MSN making a medication error might be related more to their diligence in monitoring and documenting medication administration and errors rather than an increased likelihood to make a medication administration error. The most frequent type of medication error that occurred was missed doses (79.7%) followed by medication administration not documented (29.8%).

### **Typology of Public Schools**

Disparities in access to quality health care may exist even at the public school level. The Ohio Department of Education ([http://www.ode.state.oh.us/data/group\\_def.asp](http://www.ode.state.oh.us/data/group_def.asp)) codes each school according to three typologies that can be used to examine disparities according to 1) size



and rural status; 2) socioeconomic status (SES) of the area that the school serves; and 3) the poverty level of the area, based on percentage of families that receive Aid to Dependent Children (ADC). Definitions of these typologies, districts, and the criteria by which they were developed are shown in Table 1.

**Table 1**

*Typologies of Ohio School Districts*

Typology Code	Definition	Number of Schools of returned surveys	% of Schools of returned surveys
1	Small town, rural appalachian; low SES; high poverty	12	8.2
2	Small town, rural; low SES; low poverty	16	10.9
3	Small town, rural; average SES; average poverty	18	12.2
4	Small city; low SES; very high poverty	9	6.1
5	Urban; average SES; average poverty	12	8.2
6	Large city; high poverty, average SES	10	6.8
7	Urban/Suburban; above average SES; below average poverty	19	12.9
8	Urban/Suburban affluent; very high SES; very low	12	8.2

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	poverty		
9	Unknown	39	26.5

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## Summary

Due to the increase in the number of children with chronic illnesses and the lengthening of school days, medication administration in the schools has become a health and safety issue that needs to be examined. Lack of consistent standards of medication administration in the schools leads to differences across school districts in the state and within school districts. There is little evidence to support or deny the safety of using an UAP, even though they are responsible for much of the medication administration in the schools. In one study the use of UAP were linked with a greater likelihood of medication errors, but it was not clear if this was because the UAP were poorly trained or had too many children to care for or if the larger school systems that use UAP have a better system of reporting errors and are more aware of when they occur (McCarthy, Kelly, and Reed, 2000).

From the review of literature some issues relating to medication administration in the schools were discovered. School nurses are often responsible for more than one school building and their absence leads to other staff members administering medication (Huss et al., 2001). This is often done unreliably and the school nurse can feel at risk for liability (McCarthy, Kelly, & Reed, 2000). Concerns about the criteria for delegating, follow up and training in the school setting have been raised, but there is limited research on this topic (Calabrese et al., 1999). Also there seems to be no consistent documentation of medication administration and side effects in the schools (McCarthy, Kelly, & Reed, 2000). All of this is compounded by the fact that there is an increase in the number of children with special health care needs as well as a growth in the number of before and after school programs, which leads to longer school days and results in more medication administration (Sheetz & Blum, 1998).

## Method

This descriptive study used a survey method to answer the following research questions about medication administration in public elementary schools in Ohio:

1. Who has responsibility for administering medications during an average week?
2. What is the level of training for medication administration of each provider?
3. How much detail about medication administration is documented, and where?
4. What types of difficulties with medication administration have occurred in the schools and are they related to the type of provider administering medications?
5. If medication errors should occur, how are they documented?
6. Are there differences in each of the above variables according to the school districts' typology with respect to:
  - a. size and rural status
  - b. high vs. low socioeconomic status
  - c. poverty level

## Sample

The participants were drawn from a list of all Ohio public schools that is available from the Ohio Department of Education website ([http://www.ode.state.oh.us/data/Fall\\_enroll\\_blgd\\_grade/BLDG\\_2003.XLS](http://www.ode.state.oh.us/data/Fall_enroll_blgd_grade/BLDG_2003.XLS)). There are 2,309 public elementary schools in Ohio. Using a table of random numbers, we selected 300 elementary schools to receive the survey. The only inclusion criteria for this study were: an Ohio public elementary school. About 90% of school-age children attend public schools and therefore public schools are most representative of the population (Lear, 2004). Parochial and private schools were not included in this sample. The goal was to achieve a sample size of 200 respondents (66%), which would yield a potential standard error of 7% (Fink, 2003). Of the 300 schools selected, 13 were closed and the envelopes returned to the investigator.

**Instrument**

The survey consisted of both closed and open-ended questions. Since there was no preexisting survey that had been tested for use in this area of study, the survey in this study was constructed by the researchers. Content validity was ensured by drawing items from standards of nursing and the review of literature. The survey was on one page to maximize likelihood of completion (Appendix B). It contained questions on demographics of the school nurse (to ensure that the respondent was the school nurse), as well as items that addressed the research questions of this study, such as who administers medications, the extent of their training for medication administration, methods of documentation of medication administration and medication errors, and difficulties that occur related to medication administration. Respondents were asked to include a copy of their protocols and to report only on the school to which the survey was sent.

**Procedure**

Surveys were sent in care of "School Nurse" to each of the randomly selected schools. The mailing included a cover letter explaining the purpose of the study, an Ohio map on which the nurse was asked to mark the county in which the school is located, a one-page survey, (Appendix B) and a return envelope marked for metered mail. A small incentive of a teabag was added to the envelope to encourage completion and return of the survey.

**Human Subjects Issues**

Researchers could not readily identify the specific schools from which all of the surveys were returned. With some effort on the part of the researchers, it would be possible to identify the names of nurses who were assigned to each school. Therefore, complete anonymity could not be ensured. Confidentiality was ensured by keeping the list of schools that received the survey and the data locked in separate files, and by reporting findings by groups of schools, not by individual schools. Participants who desired a copy of the final report of this study included a business card or paper with their name and address. These were kept in a file separate from the

data. Waiver of signed consent was approved by The Ohio State University Institutional Review Board to protect the confidentiality of the respondent. Consent was implied by completion and return of the survey. Waiver of a signed Health Insurance Portability and Accountability Act (HIPAA) form was approved because individual student health information was not being measured in this study.

## **Analysis**

Responses to the open-ended questions were inductively categorized, and the frequency and percentage of responses were reported. Responses to the forced choice items were reported in terms of frequency and percentage, and illustrated in tables, boxes, and bar graphs.

## **Results**

The sample consisted of 146 school nurses, one of whom was a male. This represents a 51% response rate from the 287 surveys that were mailed, and 61.4% of the counties in Ohio were represented (see Appendix A). The majority of the school nurses were white ( $n=126$ ). A little over half had at least a baccalaureate in nursing ( $n=74$ ). Years of experience as a school nurse ranged from one to thirty years with a mean of 9.3 years ( $SD=7.3$ ), and a mode of six years. Only 27.9% of the schools had access to a medical consultant and 87.8% of the schools had a protocol for medication administration in the school. Very few protocols were alike, suggesting that each school or district developed their own guidelines. On any given day medications were administered by the school nurse in 26.5 to 39.7% of the schools (mean=32.8). In the absence of a school nurse the most common person to administer medications was the secretary (mean=42.0) followed by the health aide (11.9%) and principal (9.6%). In the remainder of the schools medications were administered by either the school nurse or one of the staff mentioned previously. Teachers were rarely responsible for this task (0.9%). Training of non-nurse personnel in medication administration was typically informal,

conducted by the nurse, with no apparent standard of performance expected, and about half are trained annually.

In 91.8% of the schools, medications were stored in some type of locked unit and in 2.0% of schools medications were under double locks. Medications were not locked or not mentioned to be locked in 5.4% of schools. A variety of methods and forms were used to document medication administration and errors. In terms of documentation of medication administration, the following variables are recorded: name of child 90.5% of schools, name of medication 96.6%, time given 94.6%, day given 97.3%, dose 89.8%, route of administration 69.4%, effectiveness of medication 12.2%, and side effects 19.0%.

The most common medication error that occurred within the schools was missed doses (57.1%). Secretaries were most often responsible for missed doses. The occurrence of medication administration errors and who was responsible for these errors are shown in Table 2 and Table 3.

**Table 2**

*Errors that Occurred with Medication Administration in Ohio Public Elementary Schools in 2004 (n=147)*

Error	n	Percentage of Schools
Missed Doses	84	57.1
Dose Not Documented	56	38.1
Overdose/double dose	9	6.1
Rx Administered without authorization	24	16.3
Wrong Medications	8	5.4

**Table 3***Person Responsible for Medication Errors*

Person Responsible	Missed Dose	Not Documented	Overdose	Med adm. without authorization	Wrong medication
	%	%	%	%	%
Nurse	11.3	8.3	11.1	12.5	0
Secretary	48.7	51.4	22.2	43.8	25
Principal	10.4	16.7	11.1	18.8	12.5
Health Aide	9.6	8.3	22.2	12.5	37.5
Teachers	6.1	5.6	0	9.4	0
Student	2.6	0	0	3.1	0
Parent	2.6	0	22.2	0	0
Other	8.7	8.3	11.1	0	25

Bar graphs show the typology of school and the number of days each week that the nurse administered medications. These results are recorded in Table 4. Typology four schools (small city, low socioeconomic status, high poverty) had the highest percentage of schools (77.8%) in which the school nurse did not administer medications any day of the week. Large city, average socioeconomic status, and high poverty schools had the largest percentage (50%) of schools in which the school nurse administered medications five days a week. This was followed by the urban/suburban affluent, very high socioeconomic status, and very low poverty schools in which 25.0% of the schools had a nurse administering medications five days a week.

**Table 4***Percentage of Schools by Type, and Number of Days per Week that a School Nurse**Administers Medications*

#	Days	Type	Type	Type	Type	Type	Type	Type	Type
per		1	2	3	4	5	6	7	8
week		%	%	%	%	%	%	%	%
0 days		25.0	68.8	61.1	77.8	33.3	0	21.1	25.0
1 day		0	12.5	16.7	0	16.7	20.0	26.3	8.3
2 days		25.0	6.3	5.6	11.1	8.3	0	10.5	0
3 days		8.3	0	11.1	0	25.0	20.0	26.3	33.3
4 days		25.0	0	0	0	0	10.0	5.3	8.3
5 days		16.7	12.5	5.6	11.1	16.7	50.0	10.5	25.0

Bar graphs show the types of schools in which school nurses administer medication five days per week and in which UAPs administer medications five days per week.



## Discussion

Federal and state laws ensure that all children regardless of health status or disability, have a right to attend public schools. An average of 5.6% of all public school children receive medications during the school day (McCarthy, Kelly, & Reed, 2000). Dwindling resources for public schools have resulted in fewer school nurses, and more unlicensed personnel administering medications which may put some Ohio children at increased risk for medication errors.

In this study it was found that the secretary was the person most often responsible for all types of medication errors except for the error of a wrong medication being administered. Secretaries were more than three times more likely to be responsible for missed dose errors than school nurses. They were also more than five times more likely to be responsible for not documenting doses administered than school nurses. All medication errors can lead to serious health consequences for the child. In Ohio, medications are administered by the secretary in 42% of the schools, compared to 50% in schools across the United States (McCarthy, Kelly, & Reed, 2000). In Ohio, 57.1% of errors were missed doses compared to 79.7% in the United States. Lack of documentation of medication administration were similar in both studies (38.1% vs. 29.8%).

The training of unlicensed personnel was highly variable throughout the counties and school districts. This lack of continuity and in depth coverage of medication administration may be the cause of unlicensed personnel being the ones most often responsible for medication errors. The delegation of medication administration to unlicensed and poorly trained personnel contradicts the standard of practice outlined in the *Statement on the Scope and Standards of Pediatric Clinical Nursing Practice*. The standard states that the “pediatric nurse assigns tasks or delegates care based on the needs and preferences of the child and family and the knowledge and skill of the provider selected” (ANA, 1996, p. 35). In the schools the knowledge and skill of those whom medication administration is delegated to is rarely assessed and training is usually informal, short in duration, and sporadically repeated.

Limitations exist within this study. The 49% of schools whose nurses did not respond to the survey may have different patterns of medication administration. This topic is a hotly debated issue, and the respondents could have been unwilling to disclose actual procedures related to medication administration and medication errors that had occurred in their schools. Another limitation is that not all of the schools that responded could be categorized into one of the different typologies of schools because identifying information was removed from documents that were returned with the surveys. Also only public elementary schools in Ohio were surveyed so this study’s findings may not apply to schools outside of this description. However, 90% of all school-age children attend public schools (Lear, 2004).

Despite the fact that Ohio’s Nurse Practice Act permits delegation of medication administration in schools to UAP’s, this, one exception to the rule contradicts minimum nursing standards for safe practice. It is clear that UAP’s are responsible for 87.5 to 100% of medication errors reported by this sample of Ohio schools. Medications are ordered for children to achieve a therapeutic effect for some condition. Missed doses, overdoses, wrong medications, unauthorized medication administration, and undocumented doses place children in a vulnerable position. The use of UAP’s is greater in rural areas and small towns with low to

average SES and high to average poverty. This pattern mimics other health care access disparities in low income rural populations. The Ohio Department of Education has assured that school boards will be held harmless for “administering or failing to administer” a drug by any person authorized by the board, including UAP’s to administer a drug (Ohio Revised Code 3313.713). This type of law perpetuates unsafe practice in public schools and increases the vulnerability of all children, particularly those in low income, rural areas. New laws, practices, and policies, and sources of funding are needed to provide children with safe and effective nursing care in Ohio schools.

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## Appendix A

Highlighted counties are those counties from which surveys were returned.



## Appendix B

1. Gender: Male \_\_\_\_ Female \_\_\_\_
2. Hispanic: Yes \_\_\_\_ No \_\_\_\_
3. If Nonhispanic:  
     \_\_\_\_ American Indian or Alaska Native  
     \_\_\_\_ Asian  
     \_\_\_\_ Black or African American  
     \_\_\_\_ Native Hawaiian or Other Pacific Islander  
     \_\_\_\_ White
4. Highest Educational Level:  
     \_\_\_\_ Associate Degree  
     \_\_\_\_ Diploma  
     \_\_\_\_ BSN  
     \_\_\_\_ ND  
     \_\_\_\_ MSN  
     \_\_\_\_ PhD
5. How many years have you been a school nurse? \_\_\_\_\_
6. Is there a medical consultant for you school? \_\_\_\_\_
7. Is there a standard operating procedure or protocol for medication administration in your school?  
     \_\_\_\_ Yes \_\_\_\_ No   If Yes, please attach a copy of the procedure. Thank you
8. How are medications stored in your school? \_\_\_\_\_  
     \_\_\_\_\_
9. In an average week who administers medications in your school? Insert the letter  
     A=School Nurse   B=Principal   C=Secretary   D=Health aide   E=Teacher   F= other  
     Monday morning \_\_\_\_ Thursday morning \_\_\_\_ (please specify)  
     Monday afternoon \_\_\_\_ Thursday afternoon \_\_\_\_  
     Tuesday morning \_\_\_\_ Friday morning \_\_\_\_  
     Tuesday afternoon \_\_\_\_ Friday afternoon \_\_\_\_  
     Wednesday morning \_\_\_\_  
     Wednesday afternoon \_\_\_\_
10. Check all things that are documented when medication is administered.  
     \_\_\_\_ Verification of child's name  
     \_\_\_\_ Medication Administered  
     \_\_\_\_ Time given  
     \_\_\_\_ Day  
     \_\_\_\_ Amount/Dose  
     \_\_\_\_ Route  
     \_\_\_\_ Follow-up/Side effects
11. What type of medication administration training do the following personnel receive and how often?  
     Principal \_\_\_\_\_  
     Secretary \_\_\_\_\_  
     Health aide \_\_\_\_\_  
     Teacher \_\_\_\_\_
12. What difficulties with administering medications have occurred and who was responsible for administering medications when these difficulties occurred?  
     A=School Nurse   B=Principal   C=Secretary   D=Health aide   E=Teacher   F=other
- | <u>Difficulties</u>       | <u>Responsible Person</u> |
|---------------------------|---------------------------|
| ____ Missed Doses         | _____                     |
| ____ Not Documented       | _____                     |
| ____ Overdose/double dose | _____                     |

<input type="checkbox"/> Administered without authorization	<input type="checkbox"/>
<input type="checkbox"/> Wrong Medications	<input type="checkbox"/>